



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,024	04/14/2004	Billy W. McDaniel	2003-IP-012882U1	5994
71407	7590	11/07/2007	EXAMINER	
ROBERT A. KENT			FULLER, ROBERT EDWARD	
P.O. BOX 1431			ART UNIT	
DUNCAN, OK 73536			PAPER NUMBER	
			3676	
			MAIL DATE	
			DELIVERY MODE	
			11/07/2007	
			PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/824,024

Applicant(s)

MCDANIEL ET AL.

Examiner

Robert E. Fuller

Art Unit

3676

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 8-11, 13-31, 35-41 and 43-65 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 8-11, 13-31, 35-41 and 43-65 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's amendment, received September 28, 2007, has been fully considered. Applicant's arguments overcame the rejections set forth in the previous office action. However, examiner has formulated new grounds of rejection based on previously cited prior art. Therefore, this office action has not been made final.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. Claims 1-3, 8-11, 13-25, 31, 35-41, 43-54, and 57-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Whiteley (US 6,006,838) in view of Akinlade (WO 03/048508).

With regard to claims 1-3, 9, 11, 14, 16-18, 21-25, 31, 35-37, 39, 41, 44-47, 50-54, 57, and 61, Whiteley discloses a method of "selectively stimulating multiple production zones or intervals within a subterranean oil or gas well in a single trip"

(column 2, lines 47-48). Whiteley further teaches that his apparatus can be interconnected with a drill string (column 3, lines 14-18). The stimulating step comprises jetting a stimulation fluid through ports, or nozzles (24) at a pressure sufficient to create a cavity in the section of the subterranean formation (see column 4, lines 44-47 and figure 3). Whiteley also teaches shutting the annulus between the drill string and the wellbore wall using a packer (3). The ports (24) are opened by a sliding sleeve (22).

While Whiteley discloses the use of his system with drillpipe, Whiteley fails to explicitly disclose the use of his system during a rotary drilling application in conjunction with a drill bit.

Akinlade discloses "a method of injecting a stream of treatment fluid into an earth formation in the course of drilling a borehole into the earth formation" (see abstract). However, Akinlade's system is not used for *stimulating* a wellbore, rather it is for *sealing* a wellbore. That said, Akinlade does teach a method of injecting fluid into a formation during a drilling operation.

All of the component parts of the method are known, i.e. stimulating a formation using a stimulation tool interconnected with a drill string, and injecting treatment fluid during a rotary drilling operation. What is not shown is stimulating a formation during a rotary drilling operation.

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have combined the methods of Whiteley and Akinlade so that the formation could be stimulated during a rotary drilling operation without

tripping out of the borehole, since there appears to be nothing precluding the apparatus of Whiteley from being used in conjunction with the drill bit shown by Akinlade.

With regard to claims 8, 10, 19, 20, 38, 40, 48, 49, 58-60, and 62-65, a "second fluid" could comprise drilling fluid, which could contain many different types of additives to enhance the stimulation of the formation and clean the formation. Furthermore, the drilling fluid could be pumped at a pressure sufficient to enlarge the cavity formed by the initial fluid injection.

With regard to claims 13, 15, and 43, Whiteley in view of Akinlade fails to disclose the stimulation fluid being an unweighted drilling fluid, nor does Whiteley in view of Akinlade disclose the stimulation fluid being a relative permeability modifier.

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have used, in conjunction with Whiteley's device, a stimulating fluid with a chemistry similar to that of drilling fluid, said fluid being an unweighted drilling fluid or a relative permeability modifier, as the examiner hereby takes official notice that it was notoriously conventional in the art to have used drilling fluids with a multitude of additives to both stimulate formations as well as prevent drilling fluid loss into formations.

4. Claims 26, 27, 30, 55, and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Whiteley in view of Akinlade as applied to claims 1 and 31 above, and further in view of Soliman (US 5,111,881).

Whiteley in view of Akinlade fails to disclose sealing the treated formation using a degradable sealant, a fluid, or a solid.

Soliman teaches a method of sealing a treated subterranean formation. Soliman teaches the use degradable sealants such as polysaccharides (column 6, lines 43-63).

It would have been considered obvious, at the time the invention was made, to have sealed the formation treated by the device of Whiteley in view of Akinlade with the plugging agents disclosed by Soliman, in order to have provided temporary protection for the treated formations from the pressurized fluids introduced into the well bore as the drilling operations continued.

5. Claims 26-29, 55, and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Whiteley in view of Akinlade as applied to claims 1 and 31 above, and further in view of Guinn (US RE27,459).

Whiteley in view of Akinlade fails to disclose sealing the treated formation using a degradable sealant, a fluid, or a solid.

Guinn teaches a method of sealing a treated subterranean formation. Guinn further teaches the use of fluids such as cement (column 4, lines 50-52), and solids such as salt and paraffin beads (column 4, lines 38-39).

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have sealed the formation treated by the device of Whiteley in view of Akinlade with the plugging agents disclosed by Guinn, in order to have protected the formations which had been treated from the pressurized fluids introduced into the well bore as the drilling operations continued.

Response to Arguments

6. Applicant's arguments with respect to claim 31 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert E. Fuller whose telephone number is 571-272-0419. The examiner can normally be reached on Monday thru Friday from 8:00 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer H. Gay can be reached on 571-272-7029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number:
10/824,024
Art Unit: 3676

Page 7

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Jennifer H. Gay
Supervisory Patent Examiner
Art Unit 3676

11/02/2007
REF